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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,084	11/04/2003	Scott D. Schwab	0013.0103	4422

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MH2 TECHNOLOGY LAW GROUP (Cust. No. w/NewMarket)
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SUITE 550
TYSONS CORNER, VA 22182

EXAMINER

TOOMER, CEPHIA D

ART UNIT	PAPER NUMBER
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1797

MAIL DATE	DELIVERY MODE
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10/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/701,084

Applicant(s)

SCHWAB ET AL.

Examiner

Cephia D. Toomer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 06 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-14, 16-19, 21-27, 29-36, 38-45, 47-54 and 56-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-14, 16-19, 21-27, 29-36, 38-45, 47-54 and 56-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office action is in response to the amendment filed July 6, 2007 in which claims 1, 10, 19, 23, 32, 34, 41 and 50 were amended and claim 59 was added.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-5, 7-14, 16-18, 23-27, 29-36, 38-45, 47-54 and 56-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwab (US 5,669,938) in view of Lin (US 6,458,173).

Schwab teaches a fuel composition comprising a major proportion of a hydrocarbon middle distillate fuel (diesel, kerosene, gas oils, jet fuel, etc), about 1 to about 40 vol% water and an emission reducing amount of at least one fuel-soluble organic nitrate such as 2-ethylhexyl nitrate (see abstract; col. 2, lines 32-39). The organic nitrate includes nitrate esters of substituted aliphatic alcohols. Preferred nitrates are those having up to about 10 carbon atoms (see col. 2, line 55 through col. 3, lines 1-5 and 10-16). The nitrates are present in the fuel composition in an amount from about 500 to about 50,000 ppm (see col. 3, lines 48-55). Other additives may be included within the fuel composition such as corrosion inhibitors, antioxidants, etc (see

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col. 4, lines 52-60). Also, Schwab teaches that the finished fuel may contain minor amounts of non-hydrocarbonaceous fuels or blending components such as alcohols and dialkyl ethers (see col. 2, lines 4-10). Schwab teaches the limitations of the claims other than the differences that are discussed below.

In the first aspect, Schwab differs from the claims in that he does not exemplify a fuel composition wherein the oxygenates is blended with the fuel. However, no unobviousness is seen in this difference because Schwab teaches that the finished fuels may contain blending agents such as dialkyl ethers. This teaching suggests the combination.

In the second aspect, Schwab differs from the claims in that he does not specifically teach the methods of claims 1, 23, 32, 41 and 50. However, no unobviousness is seen in this difference because it is well settled that the discovery of a previously unappreciated property of a prior art composition does not render the old composition patentable to the discoverer. Thus, claiming of a new use, new function or unknown property does not necessarily make the claim patentable, especially in view of the prior art composition being used in the same environment as the claimed fuel composition.

Schwab differs from the claims in that he does not specifically teach the claimed sulfur content of the fuel. However, Lin teaches that it is known to use diesel fuels that contain 10 ppm or less of sulfur (see col. 10, lines 5-9).

It would have been obvious to one of ordinary skill in the art to use low sulfur fuels because Schwab is concerned about exhaust emissions and specifically teaches

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that if auxiliary liquid fuels are used with the main fuel that those fuels be desulfurized and Lin teaches that low sulfur diesel fuels meet this requirement.

3. Claims 1, 3-5, 7-14, 16-18, 23-27, 29-36, 38-45, 47-54 and 56-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham (US 5,405,417).

Cunningham teaches a fuel composition comprising a major proportion of a hydrocarbon middle distillate fuel (diesel, kerosene, gas oils, jet fuel, etc) wherein the fuel has a sulfur content of less than 500 ppm (see abstract; col. 2, lines 3-8, 24-30). This teaching suggests amount as low as 10 ppm. Cunningham teaches that the finished fuel may contain a minor amount of blending component such as an alcohol or dialkyl ether (see col. 1, lines 49-59). The fuel composition may contain up to 5000 ppm of one or more organic nitrates such as 2-ethylhexyl nitrate (see col. 3, lines 43-64). The composition may contain conventional additives (see col. 4, lines 27-34).

In the first aspect, Cunningham differs from the claims in that he does not exemplify a fuel composition wherein the oxygenates is blended with the fuel. However, no unobviousness is seen in this difference because Cunningham teaches that the finished fuels may contain blending agents such as dialkyl ethers. This teaching suggests the combination.

In the second aspect, Cunningham differs from the claims in that he does not specifically teach the methods of claims 1, 23, 32, 41 and 50. However, no unobviousness is seen in this difference because it is well settled that the discovery of a previously unappreciated property of a prior art composition does not render the old composition patentable to the discoverer. Thus, claiming of a new use, new function or

unknown property does not necessarily make the claim patentable, especially in view of the prior art composition being used in the same environment as the claimed fuel composition.

4. Claims 1-5, 7, 8, 10-14, 16, 17, 19, 21, 23-27, 29, 30, 32-36, 38, 39, 41-45, 47, 48, 50-54, 56, 57 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yeh (US 6,447,557).

Yeh teaches a diesel fuel composition wherein the fuel is an ultra-low sulfur diesel having no more than 50 ppm sulfur (see abstract). This teaching suggests a sulfur content of 10 ppm or less. Yeh teaches that the addition of at least one of an alcohol, ketone or mixture thereof to the ultra-low sulfur diesel reduces particulate emissions (see col. 3, lines 18-22). Such an alcohol includes 2-ethylhexanol and represents Applicant's hydrocarbon additive (see claim 9). The ketone represents Applicant's oxygenate. Yeh teaches one or more conventional additive may be present in the fuel composition (see col. 5, lines 21-31). With respect to the peroxide content of the fuel composition, it would be reasonable to expect that the fuel composition meets this limitation because Yeh teaches a similar fuel with the claimed additives.

Yeh fails to teach the method of reducing the amount of peroxides in a middle distillate fuel. However, it would be reasonable to expect that the fuel composition of Yeh would reduce the amount of peroxides because Yeh teaches a low sulfur fuel wherein an oxygenate and the claimed hydrocarbon additive may be present. The benefit of reducing the amount of peroxides would have naturally flowed from the suggestions of Yeh. *Ex parte Obiaya*, 227 USPQ 58 (BPAI 1985) (holding that the

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recognition of another advantage flowing naturally from following the suggestion of the prior art cannot be the basis for patentability when the difference would otherwise be obvious).

5. Applicant's arguments filed have been fully considered but they are not persuasive.

Applicant argues Schwab and Cunningham fail to teach the hydrocarbon additive of claim 19 and its dependents and that Heneghan teaches away from the use of low-sulfur fuels.

Claim 19 is no longer rejected over Schwab, Cunningham and Heneghan.

Yeh teaches the limitations of claim 19. Yeh and Lin teach that low sulfur diesel fuels are conventional diesel fuels.

With respect to Applicant's argument that neither Schwab nor Cunningham recognized that the claimed hydrocarbon additive reduces peroxides, it is well settled that the recognition of another advantage flowing naturally from following the suggestion of the prior art cannot be the basis for patentability when the difference would otherwise be obvious.

Applicant argues that Cunningham does not teach the claimed fuel composition or methods comprising, among other things, that the amount of peroxides in the fuel is reduced to less than about 8 ppm.

Cunningham teaches a low sulfur fuel wherein the sulfur content is less than 500 ppm, this teaching suggests a sulfur content of 10 ppm or less and Cunningham teaches an oxygenate and a hydrocarbon additive as set forth in the present invention.

Given these teachings, it would be reasonable to expect that the peroxide content of the fuel composition is reduced to less than about 8 ppm.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

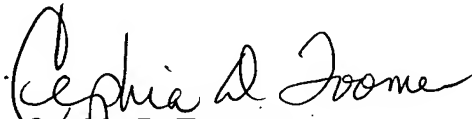
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cephia D. Toomer whose telephone number is 571-272-1126. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Cepha D. Toomer
Primary Examiner
Art Unit 1714

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